

Endocarditis

Inflammation of the endocardium may interfere with the ejection of blood from the heart by causing insufficiency or stenosis of valves. Murmurs associated with the heart sounds are major clinical manifestation and if interference with blood flow is sufficiently severe, congestive heart failure develops.

Etiology

In cattle

Haemolytic streptococci, *Coryn. Pyogens*, *C. chauvie* *Mycoplasma mycoides*.

In sheep

Streptococcus & *E.coli*

In horses

Actinobacillus equili, *Strept equi*, migration the larva of *Strongylus vulgaris*.

Pathogenesis

Endocarditis may arise from implantation of bacteria onto the valves from blood stream or by bacterial embolism of the valve capillaries. It most commonly a sequel of chronic infection and persistent bacteremia.

Myocardial disease may lead to edema of the valves and predispose to endothelial damage.

Vegetative or ulcerative lesions may develop and interfere with the normal passage of blood through the cardiac orifices.

Fragments of Vegetative lesions may become detached & cause embolic endocarditis with the production of milliary pulmonary abscesses or abscesses in the myocardium, kidneys, joints.

Adhesions after chronic infection cause shrinking, distortion and thickening of the valve cusps and at this stage interference with blood flow is severe and CHF almost always follows.

Clinical finding

In cattle there is a history of ill thrift with periodic but temporary fall in milk production. The important finding is a murmur on auscultation or thrill on palpation of the cardiac area. There may be poor exercise tolerance, fever (fluctuating) is common and secondary involvement of other organs may be cause appearance of signs of peripheral lymphadenitis, embolic pneumonia, nephritis, arthritis or myocarditis. There is usually loss of condition, pallor of mucosa and increase of heart rate, grunting respiration, moderate ruminal tympany, diarrhea or constipation, blindness, facial paralysis muscle tremors or recumbency, jaundice and sudden death.

Distention of Jugular vein, general edema may be present. The course may be as long as several weeks or as short as one day and the animal may drop dead suddenly.

Clinical pathology

- ❖ In acute cases : marked leukocytosis & shift to the left, significant increase in monocytes and macrophage, severe anaemia.
- ❖ In chronic cases (scarring of the valves). No haematological findings could be significant.

Differential diagnosis

- ❖ Pericarditis
- ❖ Vulvular disease
- ❖ Lymphomatosis

Treatment

- ❖ It's difficult to control infection
- ❖ Long course of antibiotics (2 weeks) according to culture and sensitivity.

If the isolation is difficult, broad spectrum antibiotics or combination that give broad spectrum effect may be use.

- * Penicillin + Amnioglycosides
- * Ampicillin